REMARKS

This responds to the Office Action mailed on April 27, 2009.

No claims are amended, claims 1-21 are cancelled, and claims 22-36 are added; as a result, claims 22-36 are now pending in this application.

Drawing Objections

The drawings were objected to under 37 CFR 1.83(a). The elements of the claims not shown in the drawings have been cancelled.

§ 112 Rejection of the Claims

Claims 1, 14, 18, and 20 were rejected under 35 U.S.C. § 112, first paragraph, as lacking adequate description or enablement.

Claim 4 was rejected under 35 U.S.C. § 112, first paragraph, as lacking adequate description or enablement.

These claims are cancelled.

§ 103 Rejection of the Claims

Claims 1-3, 5 and 14-21 were rejected under 35 U.S.C. § 103(a) as being obvious over Saunders (U.S. 6,351,733) in view of Cellier (U.S. 5,884,269).

Claims 4, 11 and 12 were rejected under 35 U.S.C. § 103(a) as being obvious over Saunders as modified by Cellier.

Claims 6-8 and 13 were rejected under 35 U.S.C. § 103(a) as being obvious over Saunders as modified by Cellier as applied to claims 1 and 5, and further in view of Nakano (U.S. 5,404,315).

These pending claims here rejected have been cancelled.

Saunders describes a system for adjusting voice content relative to remaining non-voice audio using a special coder/decoder configuration that allows the voice track and remaining audio to be separately adjusted in volume during playback of the track based on user preference.

Cellier describes a lossless audio compression/decompression system that uses a prediction filter and prediction error samples to encode the audio data. The coder selects from among several Huffman code tables to encode a frame such that the selected table results in the shortest encoded representation of the prediction error samples.

In contrast, the now-pending claims recite a method of adjusting the dynamics of an audio track where the loudness levels of a plurality of frames in the audio track are determined such that the loudness levels of the plurality of frames are representative of the loudness distribution of frames across the entire audio track, an apparent loudness weighting is determined for the plurality of frames of the audio track such that the weighting emphasizes the relatively greater effect that louder frames have on loudness perception, while including the contribution to overall loudness made by less loud frames, and the loudness of the track is adjusted based on the determined loudness levels and apparent loudness weighting of the plurality of frames so that the apparent loudness of the track matches a desired apparent loudness.

In another example embodiment, a method of adjusting the dynamics of an audio track comprises evaluating an audio track to determine the loudness levels of a plurality of frames in the audio track such that the loudness levels of the plurality of frames are representative of the loudness distribution of frames across the entire audio track, and using the loudness levels of a plurality of frames in the audio track to calculate a dynamic spread of the audio track. A non-linear compressor transfer function is determined to produce a desired dynamic spread, the non-linear compressor transfer function comprising greater dynamic range compression at high loudness levels that at low loudness levels, and the determined non-linear compressor transfer function is applied to the audio track to produce an audio track with the desired dynamic spread.

AMENDMENT AND RESPONSE UNDER 37 C.F.R § 1.111
Serial Number:10/043,591
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Title: METHOD AND APPARATUS FOR AUDIO LOUDNESS & DYNAMICS MATCHING

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Applicant notes support for the newly-introduced claims throughout the specification, and more specifically including the following example paragraphs:

Claim 22: paragraph 36

Claim 23: paragraph 34

Claim 24: paragraph 34,46

Claim 25: paragraph 34

Claim 26: paragraph 40

Claim 27: paragraph 47

Claim 28: paragraph 48

Claim 29 paragraph 50

Claim 30: paragraph 61, Fig. 10

Claim 31: paragraph 54

Claim 32: paragraph 61-62

Claim 33: paragraph 62

Claim 34: paragraph 63

Claim 35: paragraph 71-72

Claim 36: paragraph 75-77

Because these now-pending claims are patentably distinct from the prior art, re-examination and allowance of claims 22-36 is respectfully requested.

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CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's representative at (612) 349-9581 to facilitate prosecution of this application.
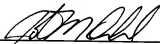
If necessary, please charge any additional fees or deficiencies, or credit any overpayments to Deposit Account No. 19-0743.

Respectfully submitted,

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Date July 27, 2009

By _____
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this ___27th_____ day of July, 2009

_____Kathryn McCook_____
Name

Signature